

IN THE CLAIMS

Please find below a listing of all of the pending claims. The status of each claim is set forth in parentheses. This listing will replace all prior versions, and listings, of claims in the present application.

1. (Currently amended) A method of load balancing between a plurality of routers by automated resetting of gateways, the method comprising:
 - receiving a packet at a first router from a source host to be forwarded to a destination host;
 - identifying a current load on the first router;
 - determining whether the packet is to be routed by another one of the plurality of routers based upon the identified current load of the first router;
 - applying an algorithm at the first router to select a second router to be a next gateway for the source host for packets destined to the destination host in response to a determination that the packet is to be routed by another one of the plurality of routers; and
 - sending an ICMP redirect message from the first router to the source host to reset a default gateway of the source host to be the second router for packets destined to the destination host.
2. (Original) The method of claim 1, wherein the algorithm comprises a pseudo-random algorithm.

3. (Original) The method of claim 1, wherein the algorithm selects the next default gateway using a round robin type selection process.
4. (Currently amended) The method of claim 1, wherein the algorithm comprises a hash function, [[,]] wherein an output of the hash function returns an index of a router to be used to route subsequent packets with a same hash value.
5. (Original) The method of claim 4, wherein the hash function is a function of any combination of the IP addresses of the destination and source hosts of the packet.
6. (Original) The method of claim 1, wherein the algorithm is load based, and further comprising communicating load levels amongst the plurality of routers.
7. (Currently amended) An apparatus for routing packets with a load balancing capability involving automated resetting of gateways, the apparatus comprising:
 - a receiver configured to receive a packet from a source host to be forward to a destination host;
 - a selection module configured to identify a current load on the first router, determine whether the packet is to be routed by another one of the plurality of routers based upon the identified current load of the first router, apply an algorithm to select another router to be a next gateway of the source host for packets destined to the destination host; and

a transmission module configured to send an ICMP redirect message to the source host to reset a current gateway of the source host to be said other router for packets destined to the destination host.

8. (Original) The apparatus of claim 7, wherein the selection module comprises a pseudo-random number generator.
9. (Original) The apparatus of claim 7, wherein the selection module applies a round-robin type algorithm to select the next gateway.
10. (Original) The apparatus of claim 7, wherein the selection module applies a hash function.
11. (Previously presented) The apparatus of claim 10, wherein the hash function is a function of a source IP address.
12. (Original) The apparatus of claim 10, wherein the hash function is a function of a combination of the source and destination IP addresses.
13. (Original) The apparatus of claim 7, wherein the apparatus is configured to communicate load levels to and receive load levels from other routing apparatus, and wherein the selection module applies a load-based algorithm.

14. (Original) The apparatus of claim 13, wherein the load-based algorithm comprises a weighted hash algorithm.
15. (Original) The apparatus of claim 13, wherein the load-based algorithm comprises a weighted round robin algorithm.
16. (Original) The apparatus of claim 13, wherein the load-based algorithm comprises a pseudo-random algorithm.
17. (Currently amended) A method of load balancing between a plurality of routers by automated selection of a router to respond to an ARP request, the method comprising:
in a first router, receiving a packet from a requesting host for forwarding via a network, identifying a current load of the first router, determining whether the packet is to be routed by another one of the plurality of routers based upon the identified current load of the first router, and transmitting an address resolution protocol (ARP) request to other ones of the plurality of routers in response to a determination that the packet is to be routed by another one of the plurality of routers;
in the other ones of the plurality of routers, receiving the ARP an address resolution protocol (ARP) request from the first router, at the plurality of routers from a requesting host from a source IP address in relation to a destination IP address;

performing the automated selection of the router to respond to the ARP request by applying an algorithm at each of the other ones of the plurality of routers to determine which single router is to respond to the ARP request; and sending an ARP reply from the responding selected router to the requesting host.

18. (Currently amended) The method of claim 17, further comprising forwarding a packet from [[the]]a source IP address to [[the]]a destination IP address.
19. (Original) The method of claim 17, wherein the algorithm comprises a hash function.
20. (Currently amended) The method of claim 19, wherein the hash function is a function of [[the]]a source and a destination IP addresses.
21. (Currently amended) The method of claim 17, wherein the algorithm determines the responding selected router using a round robin type selection process.
22. (Original) The method of claim 17, wherein the algorithm is load based, and further comprising communicating load levels amongst the plurality of routers.
23. (Currently amended) A system of load balancing between a plurality of routers involving automated selection of a router to respond to an ARP request, the system comprising:
in each of the plurality of routers,

means for receiving a packet from a requesting host for forwarding via a network;

means for identifying a current load of the plurality of routers;

means for determining whether the packet is to be routed by another one of the plurality of routers in response to the identified current load; and

means for transmitting an address resolution protocol (ARP) request to other ones of the plurality of routers in response to a determination that the packet is to be routed by another one of the plurality of routers;

means for receiving the ARP request from the other ones of the plurality of routers an address resolution protocol (ARP) request at the plurality of routers from a requesting host from a source IP address in relation to a destination IP address;

means for performing the automated selection of the router to respond to the ARP request by applying an algorithm at each of the other ones of the plurality of routers to determine which single router is to respond to the ARP request; and

means for sending an ARP reply from the responding selected router to the requesting host.